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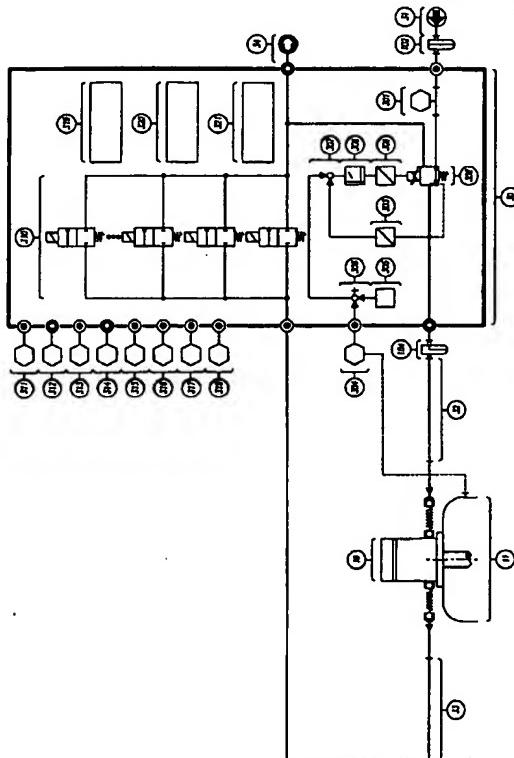
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(54) Title: MULTIFONCTIONAL ELECTRONIC DEVICE FOR A MECHANICAL SEAL AND CONTROL AND MANAGEMENT PROCESS REALISED BY SUCH DEVICE



(57) Abstract: Multifunctional electronic device (30) based on a microprocessor for checking and managing all operating and diagnostic conditions of a mechanical seal (10, 20). A mechanical seal, installed on pumps or process machines (11, 21), comprises two coupled surfaces, one rotating and integral with a shaft and one stationary and integral with the machine in which the shaft is inserted; these two surfaces are kept in contact through combined forces: a mechanical force generated by springs and another hydraulic force generated by the pressure of a fluid and suitably controlled by a pressure regulator (103, 202, 302). The electronic device regulates the pressurization of a mechanical seal to variable pressure values, keeping the optimum difference (305) constant between pressure (303) inside the mechanical seal and pressure (304) in the pump delivery line or inside the process machine in which the seal is installed.

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